

What is claimed is:

1. An etch mask on a material to be etched comprising:
an elongated portion, where the width of said elongated portion is measured substantially perpendicular to the direction of elongation;
and
an end member connected to said elongated portion, where the width of said elongated portion adjacent to said end member is an end width,
where said end member has a maximum extent measured in the direction of said end width, and
where said maximum extent of said end member is greater than said end width.
2. The mask pattern of Claim 1, where said end member is a first end member and further including
a second end member on a material to be etched and connected to said elongated portion,
where the width of said elongated portion adjacent to said second end member is a second end width,
where said second end member has a maximum extent measured in the direction of said second end width, and
where said maximum extent of said second member is greater than said second end width.
3. The mask pattern of Claim 1, wherein said elongated portion is a first elongated portion, and further including
a second elongated portion on a material to be etched and connected to said end member, where the width of said second elongated portion is measured substantially perpendicular to the direction of elongation, where the width of said second elongated portion adjacent to said end member is a second end width, and
where said maximum extent of said end member is greater than said end width.
4. The mask pattern of Claim 1, wherein said maximum extent of said end member is at least twice than said end width.
5. The mask pattern of Claim 1, wherein said end member is adjacent to the edge of the

material.

6. The mask pattern of Claim 1, wherein said first end member has an end member length measured perpendicular to said end width, and wherein said end member covers an area on the material to be etched that is greater than the product of said end width and said end member length.

7. The mask pattern of Claim 1, wherein said end member describes a shape on the material to be etch, and where said shape is a circle, a square, or a zigzag.

8. The mask pattern of Claim 7, wherein said shape is a zigzag, where said zigzag has a total elongated length, and where the total elongated length of said zigzag is at least twice said end width.

9. The mask pattern of Claim 1, wherein said material to be etched includes a semiconductor material or an insulating material.

10. The mask pattern of Claim 1, wherein said etch mask is silicon nitride, silicon oxide, silicon oxynitride, or photo-sensitive resist.

11. The mask pattern of Claim 2, wherein said elongated portion is a rectangular portion extending from said first end to said second end.

12. An etch mask comprising a plurality of mask patterns as in Claim 2, wherein each of said directions of elongation are substantially parallel.

13. The etch mask of Claim 12, wherein said etch mask is a stripe-shaped etch mask or a diffraction grating-shaped etch mask.

14. The etch mask of Claim 12, wherein at least one of said plurality of said first and second end members are adjacent to an edge of said material.

20061101 01:30:00

15. A mask pattern comprising:
a plurality of portions on a material to be etched, said plurality of portions including
two end portions, and
an elongated portion disposed between said two end portions, where the width
of said elongated portion is measured substantially perpendicular to the direction of elongation,
where in the vicinity of said two end portions, said elongated portion has an end width, said end
portion has a maximum extent measured in the direction of said end width, and where said
maximum extent is greater than said end width.
16. The mask pattern of Claim 15, wherein said maximum extent is at least twice than said
end width.
17. The mask pattern of Claim 15, wherein at least one of said two end members is adjacent
to the edge of the material.
18. The mask pattern of Claim 15, wherein said end portion has an end member length
measured perpendicular to said end width, and wherein said end member covers an area on the
material to be etched that is greater than the product of said end width and said end member
length.
19. The mask pattern of Claim 15, wherein said end member describes a shape on the
material to be etch, and where said shape is a circle, a square, or a zigzag.
20. The mask pattern of Claim 19, wherein said shape is a zigzag, where said zigzag has a
total elongated length, and where the total elongated length of said zigzag is at least twice said
end width.
21. The mask pattern of Claim 15, wherein said material to be etched includes a
semiconductor material or an insulating material.
22. The mask pattern of Claim 15, wherein said etch mask is silicon nitride, silicon oxide,
silicon oxynitride, or photo-sensitive resist.

23. The mask pattern of Claim 16, wherein said elongated portion is a rectangular portion.

24. An etch mask comprising a plurality of mask patterns as in Claim 15, wherein each of said directions of elongation are substantially parallel.

25. The etch mask of Claim 24, wherein said etch mask is a stripe-shaped etch mask or a diffraction grating-shaped etch mask.

26. The etch mask of Claim 25, wherein each of the plurality of said two end portions are adjacent to an edge of said material.

10061710-01300